

PCT

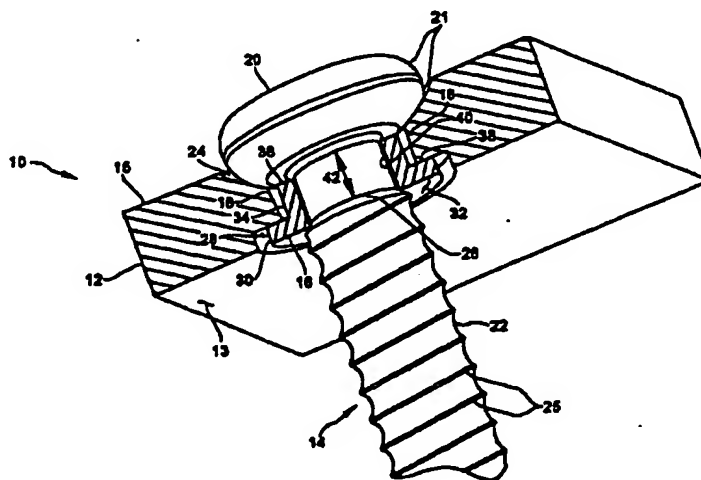
WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61B 17/80		A1	(11) International Publication Number: WO 96/39975 (43) International Publication Date: 19 December 1996 (19.12.96)
(21) International Application Number: PCT/US96/07782 (22) International Filing Date: 28 May 1996 (28.05.96) (30) Priority Data: 08/477,296 7 June 1995 (07.06.95) US (71) Applicant: DANEK MEDICAL, INC. [US/US]; 1800 Pyramid Place, Memphis, TN 38132 (US). (72) Inventor: ESTES, Bradley, T.; 3141 Shadow Green Lane, Memphis, TN 38133 (US). (74) Agents: BECK, Michael, D. et al.; Woodard, Emhardt, Naughton, Moriarty & McNett, Bank One Center/Tower, Suite 3700, 111 Monument Circle, Indianapolis, IN 46204 (US).		(81) Designated States: AU, CA, CN, JP, KR, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report.	

(54) Title: APPARATUS FOR PREVENTING SCREW BACKOUT IN A BONE PLATE FIXATION SYSTEM



(57) Abstract

A system (10) for internal fixation of bone includes a fixation plate (12) having a number of bores (18) therethrough, a corresponding number of screws (14) each having an enlarged head portion (20) and an elongated shaft portion (22) defining bone engaging threads (25) and a non-threaded portion (42) between the head and threaded portions (20, 25), and a corresponding number of screw anti-back out members (16) each having a bore (45) therethrough. The screw anti-back out members (16) are positioned within the bores (18) of the fixation plate (12) and are initially sized to slidably receive an elongated shaft (22). The screws (14) are advanced through the plate bores (18) and screw anti-back out members (16) so that the fixation plate (12) is secured to the bone with the bores (45) of the screw anti-back out members (16) surrounding a non-threaded portion (42) of the shafts (22). The system (10) is thereafter heated sufficiently to shrink the bores (45), thereby trapping the non-threaded portions (42) of the screw shafts (22) between the fixation plate (12) and the threaded portions (15).

BEST AVAILABLE COPY